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Public Attitudes Toward America's Energy Options
Report of the 2007 MIT Energy Survey

by

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Supplementary materials documenting the
Survey Instrument are included at the back of the paper

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The prospects of global warming and potential shortages of oil have brought energy back to the forefront of the list of national, indeed global, problems that governments, corporations, and society must address. In the abstract it is easy to imagine solutions to these problems, such as taxes or regulations that will affect the price of energy and change behaviors or expansion of the use fuels that are abundantly available and do not emit large amounts of carbon in the atmosphere. Nuclear power, carbon capture, and generation of power through wind and sunlight offer the most commonly discussed means of avoiding future carbon emissions. Actually implementing solutions, however, can prove quite difficult and will require at least some degree of public support.

In 2002, as part the MIT study on *The Future of Nuclear Power*, the first MIT Energy survey considered public attitudes toward nuclear power in light of other sources of electric power. This survey offered a new approach to understanding energy alternatives. The questionnaire was designed to tap how the public views many different energy sources, not just one energy source in isolation. Questions ascertained the respondents' perceptions of the attributes of the energy sources – perceived costs and environmental harms – and respondents' preferences about the nation's energy portfolio. For each of the energy sources we asked whether the fuel was harmful to the environment or not, whether the cost of electricity from that fuel was expensive, moderately priced or cheap, and whether the respondent felt the government and companies should increase use of the fuel in electricity production or decrease it. We could then examine perceptions of and support for any single fuel, especially nuclear power, and also compare fuels.

That survey found that the two key drivers behind public preferences about energy sources are general environmental harm and cost of electricity. To gauge the relative importance of perceived harms and economic costs on preferences, I employed a multiple

regression analysis in which perceived costs and environmental harms were used to predict preferences about each energy source. Both proved statistically meaningful predictors, but environmental harm systematically had stronger effects on preferences. To push this further, I conducted an experiment with the survey in which half of the respondents were given no information and half were given some factual information, either about prices or environmental harms. The price information had strong effects, while the environmental information did not.

In February, 2007, I replicated the energy survey. The same survey firm, Knowledge Networks, conducted both surveys, using similar sampling methodologies. Both surveys had sample sizes of 1,200 (slightly higher in 2002). The core questionnaire from the 2002 survey was repeated exactly, and I augmented the battery with further questions about global warming, waste treatment, and transfer of nuclear technology. Much of this report will focus on the economic and environmental perceptions and preferences about future energy use and changes between 2002 and 2007

Over the five years between the surveys several key aspects of the energy and environment picture changed. First, global warming emerged as the primary environmental concern in the country following increased public debate and media attention to the issue. Second, the United States went to war with Iraq and occupied that country to bring order. Third, oil prices rose substantially. Fourth, North Korea and Iran developed nuclear arms programs and the United States reached agreement with India on nuclear technology transfers, raising concerns about proliferation.

Despite these changes in the energy sector, public preferences about energy exhibit considerable stability. Americans hold extremely optimistic views of the alternative energy sources – solar, wind, and hydroelectric – especially as far as price is concerned. They have more realistic views of traditional fuels – fossil fuels plus nuclear power. Public opinion, in the aggregate, reflects the relative pricing of these energy sources and relative environmental harms. Cost and harm, in turn, strongly influence public desires to expand or reduce different energy sources.

What has changed over the last five years is a noticeable decline in the popularity of oil and a noticeable but quite modest increase in support for nuclear power. Oil has lost much of its luster. Americans now strongly wish to reduce the use of oil, and they view this energy source less favorably than any other source of power. Coal, seen as moderately priced but very harmful to the environment, also remains quite unpopular. Nuclear power, five years ago, was viewed similarly badly. It now seems to have gained support and is approaching natural gas in terms of favorability.

Energy Futures

The central question of interest in this study is whether Americans support or oppose increased use of various energy sources.

Consumers, such as you, have more and more say in how electricity is produced in the United States.

To make more electricity to meet the country's needs over the next 25 years, new power plants will have to be built. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all.

Respondents could choose Reduce A Lot, Reduce Somewhat, Keep the Same, Increase Somewhat, Increase A Lot, or Not Use. Table 1 reports the responses to this question in 2007.

Table 1. Distribution of Preferences About Alternative Energy Sources, 2007.

	Not Use	Reduce A Lot	Reduce Somewhat	Keep Same	Increase Somewhat	Increase A Lot
Coal	6.6%	22.1	25.6	27.0	11.4	7.4
Dams	4.0	2.1	8.8	45.1	27.3	12.6
Gas	3.5	6.8	19.7	38.8	21.4	9.9
Nuclear	11.3	14.1	13.9	25.0	21.4	14.3
Oil	6.4	36.4	31.3	18.1	4.7	3.1
Solar	2.7	3.1	4.4	13.1	25.3	51.5
Wind	3.8	1.6	3.6	14.2	24.0	52.8

Nuclear power evokes the most divided response. Thirty-nine percent would like to reduce use of nuclear power; thirty-five percent would like to increase its use. Equal numbers would like to Reduce Use of Nuclear Power A Lot and Increase Use of Nuclear Power A Lot, and of all energy sources nuclear power has by far the highest fraction of people who would choose not to use it at all (11%).

Nuclear power, however, is not the least popular fuel source in 2007. Oil is, followed by coal. Seventy-four percent of those in the sample wanted to decrease use of oil. Fifty-four percent of those in the sample wanted to decrease use of coal. Despite their relative unpopularity, though, fewer chose to "not use" these at all to generate electricity compared with nuclear power.

The two fuel sources that attracted the highest expressions of support are Solar and Wind power. Outright majorities would choose to "Increase A Lot" use of these two fuels, and better than three out of four Americans would like to increase these fuels in the U. S. energy portfolio.

Natural gas and hydroelectric power production appear as intermediate options. High percentages of the public would choose to keep these two power sources at their current levels or increase them somewhat.

Support for the fuel sources can be ordered according to the average and median preference in the public. On the 6 point scale, with Not Use equal to 0 and Increase A Lot equal to 5, Oil has the lowest average level of support at 1.9 (Reduce), followed by Coal at 2.4 and Nuclear Power at 2.7 (midway between Reduce Somewhat and Keep Same). Natural Gas has an average level of support of 3 and Hydroelectric 3.2 (both Keep Same). Solar and Wind averaged 4 (Increase Somewhat).

Comparison with 2002 shows considerable stability in public preferences about the nation's energy options, with some subtle shifts. Table 2 presents the distribution of respondent's preferences about power sources in the 2002 survey.

Preferences toward several of the power sources did not change at all. Then, as now, Coal was disliked by about 55 percent of the respondents. Solar and Wind power were as popular five years ago as they are today, with nearly identical sized majorities supporting expansion of these fuel sources. Natural Gas seemed to be the "safe option." Most people wanted to keep its use the same, or increase or decrease it slightly.

Table 2. Distribution of Preferences About Alternative Energy Sources, 2002.

	Not Use	Reduce A Lot	Reduce Somewhat	Keep Same	Increase Somewhat	Increase A Lot
Coal	4.8%	23.3	29.9	25.0	10.7	6.0
Dams	1.4	3.8	11.2	31.1	34.2	18.0
Gas	1.3	6.3	24.1	37.2	22.7	8.1
Nuclear	9.2	19.2	18.6	24.6	18.3	9.8
Oil	3.4	19.7	33.6	30.2	9.5	3.2
Solar	1.4	2.3	4.9	13.6	27.0	50.4
Wind	1.6	2.5	4.7	13.9	24.4	52.6

Oil, hydroelectricity, and nuclear power show noticeable changes in support. Nuclear power evoked the most disparate reactions in 2002, but there has been a noticeable growth in support. Forty-seven percent wanted to reduce use of nuclear power in 2002; today that figure stands at 39 percent. That being said, nuclear power does not enjoy the favored status of solar and wind; a majority do not want to increase its use. Hydroelectricity has moved in the opposite direction. It was even more popular five years ago, and support for using dams to generate power is off slightly. Oil shows the biggest decline. In 2002, 56 percent of the respondents would have decreased use of oil.

Today, that figure exceeds three-fourths of the public. Oil is the most dislike power source. Oil's fall likely reflects a combination of factors, especially rising prices and questions about supply sparked by tensions in the Middle East.

Both the 2002 and the 2007 surveys reveal distinct clusters in public support for fuels. Coal and Oil provide one group and anchor the low end of the spectrum of support. Solar and Wind reflect a second group and anchor the high end of support. Hydroelectricity, Nuclear Power, and Natural Gas represent intermediate options. How they fit into this picture depends on what attributes people use to distinguish energy options. Environmental and economic impact surely shape public perceptions, but just looking at public support can reveal little as to how much weight these factors have. Natural Gas is a fossil fuel, and might be viewed as such; it also emits less pollution and costs relatively little. Solar, Wind, and Hydro emit little pollution and are costly but popular. Nuclear power emits little carbon, but is more expensive than coal and has been hamstrung by the problem of waste disposal. Also, the facts one may glean from reports and expert debate may have little relationship to public perceptions of cost and harm.

Energy Attributes

The survey asked two questions to gauge how accurately people perceive the costs and environmental harms associated with different electricity sources. Before asking preferences about expansion or reduction of energy sources, we asked how expensive it would be to produce electricity from each source and how much fuel source damages the environment.

Consider, first, the question of cost. We asked directly:

> *How expensive do you think it is to produce electricity from each of the following fuels?*
>
> *Very Expensive*
> *Somewhat Expensive*
> *Moderately Priced*
> *Somewhat Cheap*
> *Very Cheap*

Table 3 shows the distribution of perceived costs and the average value for the 2007 and 2002 samples.

Very little changed in the distribution of perceived costs from 2002 to 2007. Oil, already seen to be expensive, was perceived to be even more expensive. Nuclear power was seen to be slightly less expensive.

Two patterns capture the most salient features of perceived cost. First, people see "alternative" fuels – hydroelectricity, solar, and wind – as cheap and conventional fuels as expensive. Perceptions of coal, natural gas, nuclear fuel, and oil ranged from

Somewhat Expensive to Moderately Priced. Perceptions of the alternatives ranged from Moderately Priced (in the case of Hydro) to Somewhat Inexpensive (in the case of Wind). The modal response for Solar and Wind was Very Inexpensive. This is clearly a misperception of the cost of electricity from these fuel sources. It might reflect confusion about pricing; it might also reflect wishful thinking.

Table 3. Perceived Cost

2007 SAMPLE

Fuel	Expensive Very (1)	Somewhat (2)	Moderately Priced (3)	Inexpensive Somewhat (4)	Very (5)	Avg.
Coal	12.9%	21.3%	31.9%	23.5%	10.4%	3.0
Nuclear	32.4	29.5	20.7	11.7	5.7	2.3
Natural Gas	16.0	33.7	35.0	13.4	2.0	2.5
Oil	33.3	37.8	21.1	6.4	1.3	2.0
Hydroelectric	5.6	18.4	36.2	27.0	12.8	3.2
Solar	9.2	20.1	20.7	23.9	26.2	3.4
Wind	4.6	16.7	19.3	25.5	33.8	3.7

2002 SAMPLE

Fuel	Expensive Very (1)	Somewhat (2)	Moderately Priced (3)	Inexpensive Somewhat (4)	Very (5)	Avg.
Coal	13.4%	24.5%	35.1%	21.4%	5.6%	2.8
Nuclear	38.8	33.0	19.3	7.4	2.0	2.0
Natural Gas	11.8	32.8	42.5	11.5	1.3	2.6
Oil	25.2	42.1	26.7	5.3	0.7	2.1
Hydroelectric	9.9	24.5	34.7	22.4	8.9	3.0
Solar	9.9	19.4	22.7	28.1	19.9	3.3
Wind	4.5	11.6	19.3	31.1	33.5	3.8

Second, among the traditional fuels people get the relative prices right. Of the conventional fuels, oil is the most expensive way to provide electricity and coal the cheapest. Natural gas and nuclear power lie somewhere in between. This relative ordering is impressive and suggests a strong degree of collective understanding in the public. Individuals may get the pricing wrong, but on average, public opinion reflects the correct ordering of price information about traditional fuels. I find this impressive because individuals do not actually know where their electricity comes from and they do not directly shop for energy sources. Where such information comes from is a good question worth exploring further, but not of immediate interest.

The survey also asked about perceived environmental harms in the forms of toxic wastes, air pollution, and waste water. The questionnaire did not include global warming and CO2 in this list, as that is not technically considered a pollutant by EPA and other questions sought to isolate how concern about the global climate shape energy attitudes. Immediately before asking about costs, the survey asked respondents to assess the overall environmental damage done by various energy production alternatives.

> *Some ways of generating electricity may be harmful to the environment we live in because they produce air pollution, water pollution, or toxic wastes. How harmful do you think each of these power sources is?*
>
> *Very Harmful*
> *Moderately Harmful*
> *Somewhat Harmful*
> *Slightly Harmful*
> *Not Harmful*

Table 4 presents the distribution of perceived environmental harms as well as the average value for each fuel source in 2007 and 2002.

As with perceived cost, the public sees a clear difference between traditional fuels and the "alternative energies" of hydroelectricity, solar, and wind power. Coal is perceived as the most harmful to the environment, followed oil and nuclear power. All are seen as, on average, moderately harmful to the environment. Natural gas and hydroelectric power are seen as somewhat harmful. Solar and Wind are seen as not harmful at all. Setting aside global warming, this rank ordering is roughly right. It certainly captures the gross differences in environmental impact of the methods of energy production

Table 4. Perceived Harm

2007 SAMPLE

	Very (1)	Moderately (2)	Somewhat (3)	Slightly (4)	Not (5)	Avg.
Coal	33.5%	27.4%	24.9%	9.7%	4.5%	2.2
Nuclear	36.8	17.1	17.9	17.5	10.7	2.5
Natural Gas	4.5	17.8	33.4	27.5	16.8	3.3
Oil	24.9	30.0	25.9	14.9	4.3	2.4
Hydroelectric	2.6	7.2	17.9	27.0	45.3	4.1
Solar	1.3	1.8	4.0	8.9	84.0	4.7
Wind	1.5	1.7	5.2	10.8	80.8	4.7

2002 SAMPLE

	Very (1)	Moderately (2)	Somewhat (3)	Slightly (4)	Not (5)	Avg.
Coal	32.9%	31.7%	24.2%	9.0%	2.3%	2.2
Nuclear	45.1	22.5	17.3	10.4	4.7	2.1
Natural Gas	6.9	18.0	35.0	29.4	10.8	3.2
Oil	23.4	37.1	28.0	8.6	2.8	2.3
Hydroelectric	6.0	12.0	19.0	29.2	33.8	3.7
Solar	2.7	3.1	8.9	14.0	71.2	4.5
Wind	1.7	2.9	6.9	12.8	75.8	4.6

The 2007 survey focused on additional attributes of power sources, including siting, waste management, and technology transfer. These problems have long dragged down support for nuclear power, but they present obstacles to the development of other fuels as well.

How would you feel if a [type of facility] were built with 25 miles of your house?
Strongly Oppose
Oppose Somewhat
Support Somewhat
Strongly Support

The survey presented respondents with several different sorts of facilities – a natural gas-fired power plant, a coal-fired power plant, a nuclear power plant, and a wind power facility (with 100 250-foot towers). We also described carbon capture and sequestration and asked

> *If carbon dioxide were pumped deep under ground within 25 miles of your home, would you support such a facility?*

Table 5 summarizes the responses to these questions in 2007. The same questions were asked for coal, natural gas, and nuclear power plants in 2002 and virtually the same pattern emerged.

Table 5. Support for and Opposition to Construction of Local Energy Facilities

	Type of Facility				
	Wind	Gas	Carbon	Coal	Nuclear
Strongly Oppose	7%	20%	38%	41%	54%
Somewhat Oppose	16	33	24	34	21
Somewhat Support	47	41	10	19	18
Strongly Support	28	5	3	3	5

Public support for and opposition to such facilities varies greatly. Wind power generating facilities enjoy support of a strong majority of fully 75 percent of the sample. But only wind seems to receive majority support. A bare majority opposes construction of a natural gas-powered electric power plant within 25 miles of their homes (53% against versus 46% for). Almost two-thirds oppose pumping carbon underground within 25 miles of their home (carbon capture and sequestration). Fully three fourths oppose construction either a coal power plant or a nuclear power plant nearby, with the strongest opposition to a nuclear facility.

Local opposition to coal and nuclear facilities is not just a problem of "not in my back yard." These are among the least popular forms of electricity generation period, and most people want to reduce their use. Opposition is especially intense, however, the closer the facilities get to home. Wind power is relatively popular as a general matter and as a local development.

I can further gauge the relative intensity of local opposition to and support for energy projects generally by combining the responses to the five types of projects considered. Ten percent of the sample opposed all 5 sorts of projects, by contrast only 1 percent

supported all 5. That ten-to-one ratio may be taken as a measure of the relative intensity of the NIMBY (Not In My Back Yard) reaction to the PIIMBY (Put It In My Back Yard) reaction.

Waste storage poses a particularly thorny problem for nuclear power as some of the most toxic products remain a threat to health for hundreds of thousands of years. The United States has not pursued reprocessing as aggressively as some other countries have; instead, the United States has pursued an underground storage strategy and developed one such facility, at Yucca Mountain, Nevada, which has yet to be put into operation.

Waste storage is a show-stopper for nuclear power. Much of the opposition to this fuel stems from waste. In our sample only 28 percent agreed with the statement that "nuclear waste could be stored safely for long periods of time." Two-thirds of the sample said that they would support a significant expansion of nuclear power "if there were effective waste storage." Unfortunately, only 19 percent thought that Yucca Mountain should be used without further delays and another 25 percent would agree to its use "only if the state of Nevada assents." Deep boreholes, a more speculative storage solution, were either supported outright or "worth consideration" according to 40 percent of the respondents, but 35 percent opposed the idea and another 25 percent were not sure.

Surprisingly, reprocessing proved highly *popular*. The survey explained that reprocessing is used in France, Japan, and elsewhere, and that this means of recycling fuel reduces the lifespan of the most toxic wastes from 100,000 years to 1,000 years. Sixty percent of the sample said that they supported the expansion of the Department of Energy's reprocessing program, and half of the sample said that they would support a significant expansion of nuclear energy in the United States if the country reprocessed its fuel.

The presentation of reprocessing to the respondents did not discuss plutonium and proliferation. The final pair of energy questions in the survey asked about technology transfers as way of getting at concern about proliferation of nuclear technologies. The two questions asked whether the respondent would support the U. S. government allowing American firms to sell nuclear technologies to countries that already have nuclear weaponry, such as India, and whether they supported sale of nuclear technology to countries that do not yet have that technology. Respondents disapproved of both proposals overwhelmingly.

Explaining Preferences

Our analysis of energy preferences in 2002 found that perceived costs and environmental harms shape public attitudes about energy alternatives. I measured the effects of perceived attributes two ways. First, I used perceptions of costs and harms to predict preferences about future deployment of specific energy sources. Second, I implemented an experiment within the survey in which one half of the sample was provided no information and one half was provided information about costs or environmental harms.

Differences across these groups provide further information about sensitivity of consumers to the costs and harms of energy sources.

The relationship between preferences about future use and perceptions of cost and harms is shown in Table 6. Each column presents the results of a regression analysis in which the answers to questions ascertaining perceived costs and harms are used to predict answers to questions about which fuels the respondent preferred expanding or contracting. The main entries (larger font) are regression coefficients. In parenthesis below each coefficient is the standard error. A statistically significant relationship is one in which the absolute value of the coefficient is at least two times the standard error. The interpretation of the coefficients is the change in the dependent variable for a unit change in the specific independent variable, holding other factors constant. I will focus on the effects of perceived harms and costs.

The dependent variables in the analyses shown in Table 6 are the preferences about future expansions and reductions of each energy source. Each consists of a 6-point scale running from 0 (do not use at all) to +5 (increase a lot). These are the variables presented in Table 1. The key independent variables of interest are two five point scales: perceived costs, which runs from –2 (very expensive) to +2 (very cheap), and perceived harm, which runs from –2 (very harmful) to +2 (not harmful at all). These are presented in Table 3.

The analysis includes other variables to capture sensitivity to costs and harms.Other measures of sensitivity to electricity costs are the respondent's income, which takes values ranging from 1 (less than $15,00) to 17 (more than $175,00), and the respondent's estimated monthly electricity bill, which has a minimum value of 1 for less than $10 and a maximum value of 14, for over $200. The survey also asked the seriousness of Global Warming --- i.e., it requires immediate action, governments should take a more cautious approach, more research is needed, or it is not a problem. Responses to this question are captured in Global Warming Real. Willingness to Pay captures the amount the respondent is willing to pay each month to reduce global warming and reflects both price sensitivity and environmental concern. Included several variables that capture perceptions of nuclear technology in particular. These are whether the respondent believes that waste can be stored safely, how likely a nuclear accident is in the next 10 years, and whether the respondent approves of the sale of nuclear technology to other countries (a key factor in proliferation). Finally, the analyses controlled for the respondent's income, education, and region of the country. Three categorical variables capture three of the four regions, with the South left as the comparison group.

Perceived harms and costs strongly predict preferences about energy sources, as was the case with the 2002 study. In fact, the results of the 2007 strongly resemble the patterns evident five years ago. Perceived environmental harms very strongly predict preferences concerning energy alternatives; costs also shape preferences but their effects are secondary to perceived harms.

Table 6. Support for and Opposition to Construction of Local Energy Facilities

	Preferences About Future Growth of Each Fuel In order to meet growing electricity demand						
	Coal	Gas	Nuclear	Oil	Dams	Wind	Solar
Perceived Harm	**.67**	**.31**	**.65**	**.31**	**.37**	**.48**	**.39**
(1 to 5: High to None)	(.04)	(.05)	(.05)	(.04)	(.05)	(.07)	(.06)
Perceived Cost	**.11**	**.22**	**.13**	**.15**	**.17**	**.13**	**.11**
(1 to 5: Expensive to Cheap)	(.04)	(.06)	(.05)	(.05)	(.05)	(.05)	(.04)
Global Warming Concern	-.03	.08	.03	-.05	.12	.10	.13
	(.06)	(06)	(.06)	(.05)	(.06)	(.06)	(.05)
Willingness to Pay	-.05	-.04	-.04	-.07	-.03	.05	.04
(0 to 10: $0 to $100/mo)	(.02)	(.02)	(.03)	(.02)	(.02)	(.02)	(.02)
Electric Bill	.02	-.03	-.01	.00	-.04	-.03	-.04
	(.02)	(.03)	(.02)	(.02)	(.03)	(.03)	(.02)
Nuclear Waste	.02	.03	-.13	.07	.10	.09	.07
(1 to 5: Safe Store to Not)	(.04)	(.05)	(.05)	(.04)	(.05)	(.05)	(.05)
Allow Nuclear Tech. Sales	-.06	-.07	.04	-.03	-.09	-.20	-.18
	(.04)	(.05)	(.05)	(.04)	(.05)	(.05)	(.04)
Nuclear Accident Likely	.04	.03	-.04	.04	-.02	.05	.00
	(.04)	(.05)	(.05)	(.04)	(.05)	(.05)	(.04)
Income	.01	.04	.04	.01	.03	.05	.04
(1 to 17)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)	(.01)
Education	.04	.06	.13	.01	.05	.18	.11
	(.04)	(.06)	(.06)	(.05)	(.05)	(.06)	(.05)
NE v. South	-.14	-.20	-.10	-.17	-.29	-.21	-.21
	(.13)	(.14)	(.14)	(.13)	(.14)	(.15)	(.13)
MW v. South	-.16	-.06	-.02	-.11	-.26	-.27	-.16
	(.11)	(.13)	(.13)	(.11)	(.13)	(.13)	(.12)
West v. South	-.17	.18	.01	-.08	-.21	-.15	-.11
	(.12)	(.14)	(.14)	(.12)	(.13)	(.14)	(.12)
Intercept	.19	1.07	.04	.77	1.40	.63	1.58
	(.28)	(.31)	(.31)	(.27)	(.35)	(.43)	(.36)
R-squared	.45	.18	.53	.20	.18	.23	.23
MSE	.99	1.11	1.12	1.00	1.22	1.16	1.02

N=523 (control group from experiment only)

Consider the case of nuclear power. The coefficient on environmental harm is .65. A unit difference in perceived harm corresponds to a difference in support for expansion of the technology of approximately two-thirds of a point. The difference between someone who sees nuclear as very harmful and someone who sees it as not harmful at all translates into a difference of 2.5 points in terms of future expansion, roughly the difference between wanting to reduce nuclear somewhat and wanting to expand it a lot. The coefficient on cost is .13. The difference between someone who views nuclear power as very cheap and someone who sees it as very expensive corresponds to about one-half of one point on the support scale.

Examining the analyses of all of the fuels reveals that perceived environmental harm accounts for most of the systematic difference explained in the analysis. The effects are particularly pronounced for coal and for nuclear power and weakest for oil and gas. Even for oil and gas perceived environmental harm has the strongest effect on preferences. The difference between seeing these fuels as very harmful versus not harmful at all translates into a 1.5 point difference on the scale of support for expansion of the use of the fuel.

Perceived costs have more modest effects, but are still quite important. The effects of perceived costs are also more uniform. The coefficients range from .11 to .22, meaning that the difference between "very cheap" and "very expensive" translates into a difference of support of one-half to one full point on the scale.

Perhaps the most alarming results in the analysis concern global warming. As we discovered in 2002, concern about global warming has very little relationship to citizens' energy preferences. Public attention to this issue has risen dramatically over the past five years and it is beginning to drive national policy-making. However, the connection between electricity generation and global warming in the public's opinions remains a remote one.

Two measures capture the effects of global warming on energy attitudes. Concern About Global Warming has a statistically significant effect on preferences only for hydroelectric power generation, and the effect is substantively small. Willingness to pay proved more substantial. In most of the regression analyses, willingness to pay positively correlates with preferences. The association is negative and statistically significant for the fossil fuels (coal, gas, and oil) and positive for solar and wind. The correlations are not significant for nuclear or hydroelectricity (and are negative in both cases). In all instances the effects are modest. The difference between someone willing to pay $100 per month to solve global warming and someone willing to pay nothing is just seven-tenths of a point in support of wind or solar and 5-tenths of a point against coal or oil.

Nuclear power's other attributes – waste, safety, and proliferation – also had noticeable effects on support for that technology. The effects were comparable to the effects of perceived cost, but much smaller than perceived environmental harm. Interestingly, nuclear waste, safety, and proliferation also mattered to people's support for wind and

solar. Those who saw these as liabilities for nuclear power were more likely to support wind and solar power than those who did not see these as problems.

Lastly, demography shapes public support for energy sources. Those with higher levels of income and education support more of every power source – on average they want accelerated energy growth compared with poorer or less well educated people. The effects of income and education were particularly pronounced for wind, solar, and nuclear power. Region had slight effects. Those in the South are much more supportive of expansion of all fuel sources, but the difference across regions, other things constant, is just two-tenths of a point on the 6 point scale.

Experiments provide another way to measure sensitivity to costs and environmental harm. In 2002 we experimented with the sample by providing randomly chosen subsets of respondents different sorts of information. Environmental information had little effect, but cost information proved quite powerful. People greatly underestimate the true cost of electricity from solar and wind and over estimate the cost of coal power. Upon providing that information we observed a large shift in support for the energy sources. Support for solar and wind dropped substantially while natural gas and coal were viewed more favorably. I replicated the cost experiment in 2007; the results closely parallel the 2002 findings.

The experiment consisted of a statement presented to the survey respondents as lead in to the questions that ascertained preferences regard future energy use. The sample was divided randomly into three groups. Half of the sample (615 people) were in the Control group. One quarter of the sample (308) were randomly assigned to Treatment Group A, and one quarter (333) were randomly assigned to Treatment Group B. The two treatment groups differed only in the information presented about the cost of Nuclear power.

Control Group (half of sample): No Information

Treatment Group A (quarter of sample):

> *The International Energy Agency, the world's leading source of information about energy resources, has estimated the cost of a typical month of electricity for a family of 4 in the US for different power sources.*
>
> *From cheapest to most expensive their estimates are:*
>
> | | |
> |---|---|
> | *Coal* | *$100* |
> | *Natural Gas* | *$125* |
> | *Nuclear* | *$150* |
> | *Oil* | *$200* |
> | *Wind* | *$250* |
> | *Dams* | *$300* |
> | *Solar* | *$400* |

Treatment Group B (quarter of sample):

> *The International Energy Agency, the world's leading source of information about energy resources, has estimated the cost of a typical month of electricity for a family of 4 in the US for different power sources.*
>
> *From cheapest to most expensive their estimates are:*
>
> | | |
> |---|---|
> | *Coal* | *$100* |
> | *Nuclear* | *$100* |
> | *Natural Gas* | *$125* |
> | *Oil* | *$200* |
> | *Wind* | *$250* |
> | *Dams* | *$300* |
> | *Solar* | *$400* |

Table 7 presents the effects of the experiment. For all but nuclear power I combine the two treatments. (There were no significant differences between the two treatment groups, validating the independence of the response to the alternatives.) The first column presents the average preference among those in the control group. Again, values less that 3 mean that people want to reduce the use of that energy source, and values above 3 mean that people want to expand the use of that fuel. The second column presents the average preference among those in the treatment groups. The last row of the table separates the two treatment groups. And the last column is the effect of the experiment – the difference between the mean in the control group and the mean in the treatment group.

Table 7. Effects of Cost Information on Average Level of Support for Energy Options

Dependent Variable: Preferred Growth of Energy Source [See Table 1]

Type of Fuel	GROUP				
	CONTROL	TREATMENT		EFFECT	
COAL	2.19	2.61		.42	
NATURAL GAS	2.84	3.06		.22	
OIL	1.85	2.00		.15	
HYDRO ELECTRIC	3.36	3.19		-.17	
SOLAR	4.40	3.80		-.60	
WIND	4.36	3.88		-.48	
		T-A	T-B	A	B
NUCLEAR	2.47	2.76	2.89	.29	.42
Number of Cases	615	308	333		

One important piece of statistical information not displayed is the standard deviation. The standard deviations associated with the distributions are in the range 1.1 (for natural gas, oil, and dams) to 1.3 (for coal, solar, and wind). The widest spread in the distribution is for nuclear power, which is about 1.5. The standard deviation changes noticeably for two fuels. It falls for nuclear power, dropping from 1.6 in the control group to 1.4 in treatment B. It rises for solar power, increasing from 1.1 among the control group to 1.36 in the treatment group. Using these standard deviations and the sample sizes one can calculate t-statistics to test the differences in means. All of the effects in the table are statistically significantly different from zero.

Interpretation of the effects of the experiment depends on people's prior beliefs about the costs of different energy sources. At a coarse level, I expected the experiment to lower support for solar, wind, and hydroelectric power and raise support for coal, natural gas, nuclear power, and oil. As revealed in Table 3, wind, solar, and hydroelectric power are widely viewed as somewhat or very cheap, even though these are the most expensive fuels. Coal, natural gas, oil, and nuclear power are thought to be moderately priced to somewhat expensive, even though these are the least expensive alternatives. On average, then, the experiment ought to have brought perceived costs into alignment with reality. The regression analyses (both in 2007 and 2002) show that preferences respond to perceived pricing. To the extent that costs affect preferences, then, the experiment should have shifted support for each of the fuels. The shifts conformed to this general conjecture.

Coal is viewed as, on the whole, moderately priced (average value in Table 3 of 3.0) but shown to be very cheap. The experiment raised support for coal the most. Nuclear power exhibited a similar rise in support. People see nuclear power as somewhat expensive (average value of 2.3 in Table 3). Treatment A revealed nuclear power to be Moderately priced to Somewhat cheap (depending on interpretations), and support for nuclear power rose .3 points. Treatment B revealed nuclear power to be very cheap and support rose over .4 points. Natural gas and oil experienced more modest gains, of .22 and .15, respectively.

Price information in line with the realities of electricity generation substantially lowered support for the alternative energy sources – dams, wind, and sunlight. The information provided reflected national averages, and some local areas will surely differ from these values. I used information distributed by EIA to calculate the average price differential from coal. The result was a very substantial increase in price over what the average person perceives from these sources. The public sees hydroelectricity and solar power as somewhat cheap and wind power as very cheap. The experiment placed all three in the category of very expensive. As a way of calibrating the magnitude of the differential, the prices of wind, hydro, and solar exceeded the highest value in the willingness to pay scale.

Support for all three fell substantially in response to the price information. Support for wind dropped four-tenths of a point and solar fell six-tenths of a point. Support for wind fell one-tenth of a point.

Are these shifts in support in line with the regression analyses? Some degree of calibration of the two is possible, depending on the interpretation of expressions such as "Very Expensive." My subjective assessment of the experimental manipulation is that it moved beliefs about prices as follows. Coal: from Moderate to Very Cheap. Natural Gas: from Somewhat Expensive to Moderate. Oil: from Expensive to Somewhat Expensive. Dams: from Somewhat Cheap to Very Expensive. Solar: from Somewhat Cheap to Very Expensive. Wind: from Very Cheap to Very Expensive. In numerical terms, the experiment changed assessments of coal prices -2 units, gas prices -1 unit, oil prices -1 unit, nuclear –2 or –3 (if Treatment A or B), dams and solar + 3 units each, and wind + 4 units in cost.

Using this subjective interpretation allows a mapping of the experiment into the regression analysis. The analysis suggests that for most of the fuels, the regression model underestimates the effect of perceived prices. Consider coal. The slope coefficient on perceived cost is .11. A movement of two units would imply an increase in support for expansion of coal of +.2 on the scale from 0 to 5. However, the experiment produced a difference of +.4, which would imply a marginal effect of price information that is approximately twice as large as estimated.

Analysis of the other fuels reveals that the regression estimates are about right for the traditional fuels and for wind power, but too low for solar and too high for hydroelectricity. In the case of nuclear power, changes in perceived costs of 2 and 3 units, for Treatments A and B respectively, should have led to increases in support for this power source of approximately .3 and .4 points. That is approximately the value of the observed experimental effect. Oil prices should have led to a shift of a little more than one-tenth of one percent, and the observed experimental effect is .15. The regression coefficient for natural gas is .31 and the change in price information is approximately 1 unit; the observed experimental effect is .22, slightly below expectations. The experimental effect for wind was an increase in perceived prices from Very Cheap to Very Expensive, 4 units. The coefficient of .13 predicts an experimental effect of lower support for wind of .52. The experiment produced a decrease of .48 points.

Solar seems to be the bookend for coal in the study. Not only is solar viewed as the clean alternative, but the experiment showed equally high price sensitivity. A move of 3 points in the cost schedule should have decreased support for solar by .33 points. In stead, the experiment produced a drop of fully .6 points. In one case, hydroelectricity, the experiment produced an effect smaller than expected. The regression estimates predict an effect of approximately .5, but the experiment lowered support for hydro by only .17 points. Some exceptions are to be expected, just by chance.

Overall, though, the experiment seems to have confirmed the regression analysis or suggests that the estimated effects of perceived costs are a bit too low.

As a matter of public policy, this analysis underscores the lesson from the earlier survey reported in the *Future of Nuclear Energy*. Public support for energy sources is highly dependent on perceived environmental harms and economic costs. Movements in costs of oil and gas have lowered support for those energy sources. Efforts by government and industry to reduce environmental impacts of specific energy sources can have dramatic effects on support for power sources. This seems to be particularly true for nuclear power and coal. And the public is highly responsive to cost information, either shaped by public education campaigns or by actual industrial performance. In this regard, support for solar, wind, and hydroelectricity seems especially soft and likely to erode quickly if there is a significant attempt to deploy any of these technologies without improvements that reduce the cost of providing electricity through these means.

Survey Instrument

Field Report
Energy Survey 2007

Conducted for,
Massachusetts Institute of Technology

Submitted to:
Stephen Ansolabehere
Professor of Political Science
March 6, 2007

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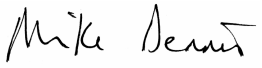
Knowledge Networks Deliverable Authorization			
Printed Name	Signature	Date	Title
J. Michael Dennis		March 6, 2006	VP, Government and Academic Research

Table of Contents

Energy Survey 2007

Introduction

Knowledge Networks (KN) conducted a study of opinions on energy use, energy sources and environmental issues for the Massachusetts Institute of Technology (MIT).

MIT provided KN with the survey instrument. In conjunction with MIT, KN revised and programmed the instrument so that it met the design requirements of the project as well the MSN WebTV platform. A pretest was conducted to determine the survey length and to verify the functionality of the survey.

The survey was fielded on February 23rd 2007 to a sample of 1,714 KN panel members age eighteen years of age or old that represented a general population sample. The goal of the survey was collect a minimum of 1,200 completed interviews. Table 1 below displays the field period and completion rate of the study. Table 2 displays the breakout of the GROUP variable. There were three random sample groups in the survey, 0, A and B with a goal of 50%, 25% and 25% respectively. The groups determined what information was shown to respondents about energy costs from different power sources. Group 0 did not receive any information, while groups A and B did, with slightly different information (see questionnaire in Appendix A).

Table 1. Survey Completion Rate

Field Start Date	Field End Date	Cases Fielded	Completes	Completion Rate
2/23/07	3/4/07	1,714	1,256	73%

Table 2. GROUP Variable

Group	Number	Percent
0	615	49%
A	308	24.5%
B	333	26.5%

Data File Deliverables and Descriptions

The following file has been delivered to MIT. 1) A fully labeled SPSS data file containing the closed and open ended data including Knowledge Network's standard profile variables, which are owned by Knowledge Networks and licensed to MIT for analysis and reporting.

Table 3. Deliverable Description

Delivery Date	*File Type*	*File Name*	*File Size*	*N Records*	*Inclusion of Standard Background Demographics*
3/6/07	SPSS	lMIT_Energy2007_Client.sav	340KB	N=1,256	Yes

Table 3 below shows the name and description of each of the supplemental variables. .

Table 4: Supplemental Variables

Variable Name	Variable Description
serial	Case Identification Number
weight	Final Post Stratification Weight
group	Group
dt_start	Date interview started
tm_start	Time interview started
dt_end	Date interview ended
tm_end	Time interview ended
duration	Duration of interview
durcat	Duration of interview (categorical)
ppgender	Gender
ppage	Age -- profile and Recruitment
ppagecat	Age – 7 categories
ppagect4	Age – 4 categories
ppeduc	Education (highest degree received)
ppeducat	Education – categorical
ppethm	Race/Ethnicity
pphhhead	Household head
pphhsize	Household size
pprent	Ownership status of living quarters
ppdualin	Dual Income HH
ppincimp	HH Income (profile and imputed)

Variable Name	Variable Description
ppnet	HH Internet Access
ppmarit	Marital status
pphouse	Housing type
ppt01	Total number of HH members age 1 or younger
ppt25	Total number of HH members age 2 to 5
ppt612	Total number of HH members age 6 to 12
ppt1317	Total number of HH members age 13 to 17
ppt18ov	Total number of HH members age 18 or older
ppwork	Current Employment Status
ppstaten	State of residence
ppreg4	Region 4 - based on State of residence
ppreg9	Region 9 - based on State of residence

Key Personnel

Key personnel on the Energy Survey 2007:

Mike Dennis – Vice President and Managing Director, Client Service. M. Dennis is based in the Menlo Park office of Knowledge Networks.
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Knowledge Networks Methodology

Introduction

Knowledge Networks has recruited the first online research panel - KnowledgePanel[SM] - that is representative of the entire U.S. population. Panel members are randomly recruited by telephone and households are provided with access to the Internet and hardware if needed. Unlike other Internet research which covers only individuals with Internet access who volunteer for research, Knowledge Networks surveys are based on a sampling frame which includes both listed and unlisted numbers, and is not limited to current Web users or computer owners.

Knowledge Networks selects households using random digit dialing (RDD). Once a person is recruited to the panel, they can be contacted by e-mail (instead of by phone or mail). This permits surveys to be fielded very quickly and economically. In addition, this approach reduces the burden placed on respondents, since e-mail notification is less obtrusive than telephone calls, and most respondents find answering Web questionnaires to be more interesting and engaging than being questioned by a telephone interviewer.

KnowledgePanel[SM] Recruitment Methodology

Beginning recruitment in 1999, Knowledge Networks (KN) has established the first online research panel based on probability sampling that covers both the online and offline populations in the U.S. The panel members are randomly recruited by telephone and households are provided with access to the Internet and hardware if needed. Unlike other Internet research that covers only individuals with Internet access who volunteer for research, Knowledge Networks surveys are based on a sampling frame that includes both listed and unlisted phone numbers, and is not limited to current Web users or computer owners. Panelists are selected by chance to join the panel; unselected volunteers are not able to join the KN panel.

Knowledge Networks initially selects households using random digit dialing (RDD) sampling methodology. Once a household is contacted by phone and household members recruited to the panel by obtaining their e-mail address or setting up e-mail addresses, panel members are sent surveys over the Internet using e-mail (instead of by phone or mail). This permits surveys to be fielded quickly and economically, and also facilitates longitudinal research. In addition, this approach reduces the burden placed on respondents, since e-mail notification is less obtrusive than telephone calls, and allows research subjects to participate in research when it is convenient for them.

Knowledge Networks' panel recruitment methodology uses the quality standards established by selected RDD surveys conducted for the Federal Government (such as the CDC-sponsored National Immunization Survey).

Knowledge Networks utilizes list-assisted RDD sampling techniques on the sample frame consisting of the entire United States residential telephone population. Knowledge Networks excludes only those banks of telephone numbers (consisting of 100 telephone numbers) that have zero directory-listed phone numbers. Two strata are defined using 2000 Census Decennial Census data that has been appended to all telephone exchanges. The first stratum has a higher concentration of Black and Hispanic households and the second stratum has a lower concentration relative to the national estimates. Knowledge Networks' telephone numbers are selected from the 2+ banks with equal probability of selection for each number within each of the 2 strata, with the Black and Hispanic stratum being sampled at a higher rate than the other stratum. Note that the sampling is done without replacement to ensure that numbers already fielded by Knowledge Networks do not get fielded again.

Telephone numbers for which Knowledge Networks is able to recover a valid postal address is about 60%-70%. The telephone phone numbers for which an address is recovered are selected with certainty; between one-half and one-third of the remainder were subsampled randomly depending on the recruitment period up until July 2005 at which point the subsampling was discontinued. The address-matched telephone numbers are sent an advance mailing informing them that they have been selected to participate in KnowledgePanel[SM].

Following the mailing, the telephone recruitment process begins for all sampled phone numbers. Cases sent to telephone interviewers are dialed up to 90 days, with at least 10 dial attempts on cases where no one answers the phone, and on phone numbers known to be associated with households. Extensive refusal conversion is also performed. Experienced interviewers conduct all recruitment interviews. The recruitment interview, which typically requires about 10 minutes, begins with the interviewer informing the household member that they have been selected to join KnowledgePanel[SM]. If the household does not have a PC and access to the Internet, they are told that in return for completing a short survey weekly, the household will be given a WebTV set-top box and free monthly Internet access. All members in the household are then enumerated, and some initial demographic variables and background information of prior computer and Internet usage are collected.

As of August 2002, those RDD households that inform interviewers that they have a home computer and Internet access have been recruited to the panel and asked to take their surveys using their own equipment and Internet connections. Points, which can be redeemed for cash at regular intervals, are given to respondents for completing their surveys and take the place of a free WebTV and monthly Internet access provided to other panel households. Additional incentive points may be added to specific surveys to improve response rates or to compensate for longer surveys.

Prior to shipment, each WebTV unit is custom configured with individual email accounts, so that it is ready for immediate use by the household. Most households are able to install the hardware without additional assistance, though Knowledge Networks maintains a telephone technical support line and will, when needed, provide on-site

installation. The Knowledge Networks Call Center also contacts household members who do not respond to e-mail and attempts to restore contact and cooperation. PC panel members provide KN with their email account and their weekly surveys are sent to that email account.

All new WebTV panel members are sent an initial survey to confirm equipment installation and familiarize them with the WebTV unit. For all new panel members, demographics such as gender, age, race, income, and education are collected in a follow-up survey for each panel member to create a member profile. This information can be used to determine eligibility for specific studies and need not be gathered with each survey. Once this survey is completed, the panel member is regarded as active and ready to be sampled for other surveys. Parental or legal guardian consent is also collected for conducting surveys with teenagers age 13-17 as part of the first survey.

Survey Administration

For client-based surveys, a sample is drawn at random from active panel members who meet the screening criteria (if any) for the client's study. The typical sample size is between 200 and 2000 persons, depending on the purpose of the study. Once selected, members can be sent an advance letter by email several days prior to receiving the questionnaire through their WebTV appliance or personal computer to notify them of an important, upcoming survey.

Once assigned to a survey, members receive a notification email on their WebTV or personal computer letting them know there is a new survey available for them to take. The email notification contains a button to start the survey. No login name or password is required. The field period depends on the client's needs, and can range anywhere from a few minutes to two weeks.

Email reminders are sent to uncooperative panel members. If email does not generate a response, a phone reminder is initiated. The usual protocol is to wait at least three days and to permit a weekend to pass before calling. Knowledge Networks also operates an ongoing incentive program to encourage participation and create member loyalty. To assist panel members with their survey taking, each individual has a personalized "home page" that lists all the surveys that were assigned to that member and have yet to be completed.

Survey Sampling from KnowledgePanel[SM]

Once Panel Members are recruited and profiled, they become eligible for selection for specific surveys. In most cases, the specific survey sample represents a simple random sample from the panel. The sample is drawn from eligible members using an implicitly stratified systematic sample design. Customized stratified random sampling based on profile data is also conducted, as required by specific studies.

The primary sampling rule is not to assign more than six surveys per month to members with the expectation that on average four surveys a month will be completed by a panel member. In certain cases, a survey sample calls for pre-screening, that is, members are drawn from a sub-sample of the panel (e.g., females, Republicans). In such cases, care is taken to ensure that all subsequent survey samples drawn that week are selected in such a way as to result in a sample that is representative of the panel distributions.

Weighting and Estimation

Whereas in principle the sample design is an equal probability design that is self-weighting, in fact there are several known deviations from this guiding principle. Furthermore, despite our efforts to correct for known sources of deviation from equal-probability design, there are several other sources of survey error that are an inherent part the process. We address these sources of survey error globally through the poststratification weights, which we describe below.

Sample Design Weights

The seven sources of deviation from epsem design are:

1. Half-sampling of telephone numbers for which we could not find an address,
2. RDD sampling rates proportional to the number of phone lines in the household,
3. Minor oversampling of Chicago and Los Angeles due to early pilot surveys in those two cities,
4. Short-term double-sampling the four largest states (CA, NY, FL, and TX) and central region states,
5. Under-sampling of households not covered by MSN TV,
6. Oversampling of minority households (Black and Hispanic),
7. Selection of one adult per household.

A few words about each feature:

1. Once the telephone numbers have been purged and screened, we address match as many of these numbers as possible. The success rate so far has been in the 50-60% range. The telephone numbers with addresses are sent a letter. The remaining, unmatched numbers are half-sampled in order to reduce costs. Based on previous research we suspect that the reduced field costs resulting from this allocation strategy will more than offset increases in the design effect due to the increased variance among the weights. We are currently quantifying these balancing features.

2. As part of the field data collection operation, we collect information on the number of separate phone lines in the selected households. We correspondingly down-weight households with multiple phone lines.

3. Two pilot surveys carried out in Chicago and Los Angeles increased the relative size of the sample from these two cities. The impact of this feature is disappearing as the panel grows.

4. Since we anticipated additional surveying in the four largest states, we double-sampled these states during January-October 2000. Similarly, the central region states were over-sampled for a brief period.

5. Certain areas of the U.S. are not serviced by MSN®. We select a smaller sample of phone numbers in those areas and use other Internet Service Providers for Internet access of recruited households in those areas.

6. As of October 2001, we began oversampling minority households (Black and Hispanic) to increase panel capacity for those subgroups.

7. Finally, for most of our surveys, we select panel members across the board, regardless of household affiliation. For some surveys, however, we select members in two stages: households in the first stage and one adult per household in the second stage. We correct for this feature by multiplying the probabilities of selection by 1/ai where ai represents the number of adults (18 and over) in the household.

Poststratification Weights

The primary purpose of a poststratification adjustment to survey weights is to reduce the sampling error for characteristics highly correlated with reliable demographic and geographic totals – called population benchmarks. To implement poststratification, we used the following raking variables:

- gender: male, female
- age: 18-29, 30-44, 45-59, 60 and over
- race/ethnicity: white (nonhispanic), black (nonhispanic), other (nonhispanic), hispanic
- region: northeast, midwest, south, west
- education - highest level achieved: less than high school, high school, some college, college degree or more

In order to calculate final weights, we derive weighted sample distributions along various combinations of the above variables. Similar distributions are calculated using the most recent U.S. Census Bureau's Current Population Survey data and the Knowledge Networks panel data. Cell-by-cell adjustments over the various univariate and bivariate distributions are calculated to make the weighted sample cells match those of the U.S. Census and the Knowledge Networks panel. This process, known as raking, is repeated iteratively until there is convergence between the weighted sample and benchmark distributions (CPS distributions). Occasionally, collapsing of post-stratification cells is necessary. This is dependent on the size of the sample and topology of the sample universe.

APPENDIX A: QUESTIONNAIRE

[SP]
Q1. How would you describe the community that you live in?

A large city 1
A suburb of a large city 2
A medium sized city 3
A suburb of a medium sized city 4
A small city 5
A suburb of a small city 6
A town 7
A rural area 8

[SP]
Q2. What is the most important problem facing the United States today?

Immigration 1
Crime 2
Pollution of water and air 3
Unemployment and Jobs 4
Global Warming 5
Low wages 6
Poverty 7
Corruption in Government 8
Taxes 9
Government Spending 10
Federal Budget Deficit 11
Inequality 12
Family Values 13
Energy 14
Inflation 15
Health care 16
Social Security 17
Drugs 18
Racism 19
Iraq 20
Terrorism 21
AIDS 22
Abortion 24
Other 24

[SP]
Q3. Which of the following captures your general opinion?

Environmental regulations in this country are …..

Are Much Too Strong 1

Are Too Strong 2
Are About Right 3
Need to be Somewhat Stronger 4
Need to be Much Stronger 5

[SP]

Q4. Which is the most important environmental problem facing the U. S. today?

Toxic waste 1
Ozone depletion 2
Endangered species 3
Acid Rain 4
Global Warming 5
Smog 6
Urban Sprawl 7
Water pollution 8
Overpopulation 9
Destruction of ecosystems 10

[SP]

[Q4=1..10; REMOVE ANSWER SELECTED IN Q4]

Q4B. Of the remaining environmental problems below, which is the most important problem facing the US today?

Toxic waste 1
Ozone depletion 2
Endangered species 3
Acid Rain 4
Global Warming 5
Smog 6
Urban Sprawl 7
Water pollution 8
Overpopulation 9
Destruction of ecosystems 10

[NUMBER BOX; RANGE 0-999999]

[TWO CHECK BOXES; ALLOW ONLY ONE RESPONSE]

Q5. Approximately how many miles do you put on your vehicle each year? Please make your best guess

_____ Miles
__ I don't drive
__ I do not know

[SP]

Q6. Approximately how much did you pay for electricity last month?

Under $25 1
$25 to $50 2
$50 to $75 3
$75 to $100 4
$100 to $125 5
$125 to $150 6
$150 to $200 7
Over $200 8
I do not know 9

[SP]
Q7. If it solved global warming would you be willing to pay $5 more a month on your electricity bill?

Yes 1
No 2

[SP]
[Q7=1]
Q7A. Would you be willing to pay $10 more a month on your electricity bill?

Yes 1
No 2

[SP]
[Q7A=1]
Q7B. Would you be willing to pay $15 more a month on your electricity bill?

Yes 1
No 2

[SP]
[Q7B=1]
Q7C. Would you be willing to pay $25 more a month on your electricity bill?

Yes 1
No 2

[SP]
[Q7C=1]
Q7D. Would you be willing to pay $50 more a month on your electricity bill?

Yes 1
No 2

[SP]
[Q7D=1]
Q7E. Would you be willing to pay $75 more a month on your electricity bill?

Yes 1
No 2

[SP]
[Q7E=1]
Q7F. Would you be willing to pay $100 more a month on your electricity bill?

Yes 1
No 2

[SP]
Q5. There is a lot of talk about global warming caused by carbon dioxide emissions from human activities. Which of the following do you think best describes your view?

Immediate and drastic action is necessary. 1
We should take some action now. 2
More research is needed before action is taken. 3
This is not a serious problem. 4

[INTRO: DISPLAY]
We'd like you to now consider different ways that we produce energy in the United States.

[GRID]
Q8. Some ways of generating electricity may be harmful to the environment we live in. How harmful do you think each of these power sources is?

	Very Harmful	Moderately Harmful	Somewhat Harmful	Slightly Harmful	Not Harmful At All	Not Sure
Coal	o	o	o	o	o	o
Natural Gas	o	o	o	o	o	o
Nuclear	o	o	o	o	o	o
Dams	o	o	o	o	o	o
Oil	o	o	o	o	o	o
Solar	o	o	o	o	o	o
Wind	o	o	o	o	o	o

[GRID]
Q9. We would like you to think about the costs of producing electricity of different sources of electricity. How expensive do you think it is to produce electricity with each of the following fuels?

	Very Expensive	Somewhat Expensive	Moderately Priced	Somewhat Cheap	Very Cheap	Not Sure
Coal	o	o	o	o	o	o
Natural Gas	o	o	o	o	o	o
Nuclear	o	o	o	o	o	o
Dams	o	o	o	o	o	o
Oil	o	o	o	o	o	o
Solar	o	o	o	o	o	o
Wind	o	o	o	o	o	o

[STOP RESPONDENTS FROM GOING BACK AT THIS POINT]

Split Sample Version of intro before Question 10:
At this point the sample is randomly divided into 3 groups. Two groups are told the projected cost of electricity from different sources. One group is provided no information. Create variable:

GROUP
0 – ½ of sample
A – ¼ of sample
B – ¼ of sample

[GROUP A INTRO: DISPLAY]
[GROUP=A]
The International Energy Agency, the world's leading source of information about energy resources, has estimated the cost of a typical month of electricity for a family of 4 in the US for different power sources.

From cheapest to most expensive their estimates are:

Coal	$100
Natural Gas	$125
Nuclear	$150
Oil	$200
Wind	$250
Dams	$300
Solar	$400

[GROUP B INTRO: DISPLAY]
[GROUP=B]
The International Energy Agency, the world's leading source of information about energy resources, has estimated the cost of a typical month of electricity for a family of 4 in the US for different power sources.

From cheapest to most expensive their estimates are:

Coal	$100
Nuclear	$100
Natural Gas	$125
Oil	$200
Wind	$250
Dams	$300
Solar	$400

[GRID]
Q10. Consumers, such as you, have more and more say in how electricity is produced in the United States.

To make more electricity to meet the country's needs over the next 25 years, new power plants will have to be built. Companies and government agencies need to start planning today. How should we meet this demand? For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all.

	Reduce A Lot	Reduce Somewhat	Keep Same	Increase Somewhat	Increase A Lot	Not Use At All
Oil	o	o	o	o	o	o
Dams	o	o	o	o	o	o
Nuclear	o	o	o	o	o	o
Solar	o	o	o	o	o	o
Coal	o	o	o	o	o	o
Wind	o	o	o	o	o	o
Natural Gas	o	o	o	o	o	o

[GRID]
[KEEP PERCENTAGES ON LINE BELOW THE LABELS AND INCLUDE ( )]
Q11. Regardless of whether you want more of any particular fuel source, how much do you think the U. S. <u>will</u> rely on each of the following fuels for electricity over the next 10 years?

	A Lot (More than 25% of electricity)	Some (10-25%)	Not Much (5-10%)	Very Little (Less than 5%)
Coal	o	o	o	o
Nuclear	o	o	o	o
Natural Gas	o	o	o	o
Oil	o	o	o	o
Dams	o	o	o	o
Renewables (Solar, Wind)	o	o	o	o

[SP]
Q12. To meet new electricity demand, utilities will have to build additional power plants. How would you feel if a new natural gas fired power plant were built within 25 miles of your home?

Strongly Oppose..... 1
Somewhat Oppose..... 2
Support..... 3
Strongly Support..... 4

[SP]
Q13. How would you feel if a new coal-fired power plant were built within 25 miles of your home?

Strongly Oppose..... 1
Somewhat Oppose..... 2
Support..... 3
Strongly Support..... 4

[SP]
Q14. How would you feel if a new nuclear power plant were built within 25 miles of your home?

Strongly Oppose..... 1
Somewhat Oppose..... 2
Support..... 3
Strongly Support..... 4

[SP]
Q15. How would you feel if a large wind power facility (with 100 250-foot towers) were built within 25 miles of your home?

Strongly Oppose..... 1
Somewhat Oppose..... 2
Support..... 3
Strongly Support..... 4

[SP]
[RANDOMLY FLIP REPONSE LIST – ALWAYS KEEP NOT SURE LAST]
Q16. There are approximately 100 nuclear power plants in the United States. There was a serious accident at Three Mile Island in 1979. How likely do you think it is that in the next 10 years there will be a serious accident at a nuclear power plant?

Almost certainly will happen, ... 1
Very likely, ... 2
Somewhat likely, ... 3
Somewhat unlikely,..... 4
Very unlikely, ... 5
Almost certainly will not happen..... 6
Not sure..... 7

[Q17PRE: DISPLAY]
Coal is a major source of carbon dioxide emissions, which scientists have concluded contribute to global warming. One technology, called carbon capture and sequestration, takes the carbon dioxide out of coal and pumps this gas into underground caverns. This technology would increase the price of electricity by approximately $50 per month but it would cut almost all greenhouse gas emissions from coal.

[SP]
Q17. Would you support use of this technology to cut greenhouse gas emissions even if electricity prices went up?

Strongly Support..... 1
Support Somewhat..... 2
Oppose Somewhat..... 3
Oppose Strongly..... 4
Neither Support Nor Oppose 5

[SP]
Q18. If carbon dioxide were pumped deep under ground within 25 miles of your home would you support or oppose such a facility?

Strongly support 1
Support somewhat..... 2
Oppose somewhat..... 3
Strongly oppose 4
Neither Support Nor Oppose 5
Not Sure..... 6

[INTRO: DISPLAY]
Nuclear power plants produce no greenhouse gases. Nuclear power plants do produce a small amount of highly dangerous radioactive waste. This waste slowly loses its toxicity over a span of 100,000 years.

[SP]
Q19. Do you agree or disagree with the following: Nuclear waste can be stored safely for many years.

Strongly Agree 1
Agree 2
Disagree 3
Disagree Strongly 4
Not Sure 5

[SP]
Q20. If there were a safe and effective way to deal with nuclear waste would you support a significant expansion of nuclear power to meet future energy needs?

Yes, Definitely 1
Yes, but with reservations 2
Probably Not 3
Definitely Not 4
Not Sure 5

[Q21PRE; DISPLAY]
Currently spent nuclear waste is stored above ground at nuclear facilities, until the U. S. has a long-term storage plan. The United States Department of Energy has prepared a long-term underground storage facility in Yucca Mountain, Nevada. Objections from the state of Nevada and some experts have slowed down the development of this facility.

[SP]
Q21. Do you think the United States should complete and use this facility to store spent nuclear waste underground?

Yes, definitely 1
Yes, but only if the state of Nevada agrees 2
No, the federal government needs to find another site 3
No, because we shouldn't have such a facility 4
Not Sure 5

[SP]
Q22. A recent proposal from nuclear scientists is to bury waste permanently in holes drilled deeply into the Earth's crust, where no water flows. The pressure of the earth would keep the waste locked in place. Do you think such dispersed storage is a good idea?

Yes, Definitely 1
Worth Considering 2
Probably Should Not Do 3

Definitely Not 4
Not sure 5

[Q23PRE; INTRO]
France and Japan recycle their nuclear fuel using a method called reprocessing. Reprocessing makes electricity from nuclear power a little more expensive but it reduces the time it takes waste to become harmless from 100,000 years to as little as 1,000 years.

[SP]
Q23. The Department of Energy is considering a large effort to introduce reprocessing in the United States. Do you support or oppose such an effort?

Support strongly 1
Support somewhat 2
Oppose somewhat 3
Oppose strongly 4
Not Sure 5

[SP]
Q24. Would you support a significant expansion of nuclear power if the United States reprocessed all of its nuclear fuel?

Support strongly 1
Support somewhat 2
Oppose somewhat 3
Oppose strongly 4
Not Sure 5

[SP]
Q26. Recently the United States Government agreed to allow U. S. companies to sell nuclear power plant technology to India. India already has the knowledge to make nuclear bombs, but it has not signed the international agreement to prohibit the spread of nuclear bomb know-how.

Do you support or oppose the sale of nuclear technology to India?

Strongly oppose 1
Oppose somewhat 2
Support somewhat 3
Strongly Support 4
Not Sure 5

[SP]
Q27. Other countries allow their companies to sell nuclear power plants and technology to countries that do not yet have nuclear weapons. Should the United States government allow U. S. companies to do so as well?

Yes, definitely 1
Yes, but with reservations 2
Probably not 3
No, definitely not 4
Not sure 5

[SP]

Q28. In politics do you consider yourself to be a Democrat, Republican, another partisan, or a non-partisan?

Republican 1
Democrat 2
Green 3
Reform 4
Other (please specify) 5
No Party 6

APPENDIX B: CODEBOOK
Frequency Tables
Weighted by weight

GROUP DATA ONLY: GROUP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 0 – 1/2 of sample	625	49.8	49.8	49.8
	2 A – 1/4 of sample	310	24.7	24.7	74.5
	3 B – 1/4 of sample	321	25.5	25.5	100.0
	Total	1256	100.0	100.0	

Q1 How would you describe the community that you live in?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A large city	215	17.1	17.1	17.1
	2 A suburb of a large city	192	15.3	15.3	32.4
	3 A medium sized city	173	13.8	13.8	46.3
	4 A suburb of a medium sized city	108	8.6	8.6	54.9
	5 A small city	128	10.2	10.2	65.1
	6 A suburb of a small city	46	3.6	3.7	68.7
	7 A town	153	12.2	12.2	80.9
	8 A rural area	239	19.0	19.1	100.0
	Total	1253	99.8	100.0	
Missing	-1 Refused	3	.2		
Total		1256	100.0		

Q2 What is the most important problem facing the United States today?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Immigration	122	9.7	9.9	9.9
	2 Crime	82	6.6	6.6	16.5
	3 Pollution of water and air	12	1.0	1.0	17.5
	4 Unemployment and Jobs	67	5.3	5.4	22.9
	5 Global Warming	54	4.3	4.4	27.3
	6 Low wages	27	2.1	2.2	29.4
	7 Poverty	37	3.0	3.0	32.4
	8 Corruption in Government	106	8.4	8.6	41.0
	9 Taxes	10	.8	.8	41.9
	10 Government Spending	20	1.6	1.6	43.5
	11 Federal Budget Deficit	22	1.7	1.7	45.2
	12 Inequality	12	1.0	1.0	46.2
	13 Family Values	115	9.2	9.3	55.5
	14 Energy	27	2.2	2.2	57.7
	15 Inflation	13	1.0	1.0	58.8
	16 Health care	132	10.5	10.7	69.5
	17 Social Security	14	1.1	1.2	70.6
	18 Drugs	28	2.3	2.3	72.9
	19 Racism	4	.3	.3	73.2
	20 Iraq	173	13.8	13.9	87.2
	21 Terrorism	106	8.4	8.5	95.7
	22 AIDS	8	.7	.7	96.4
	23 Abortion	6	.5	.5	96.9
	24 Other	38	3.0	3.1	100.0
	Total	1238	98.6	100.0	
Missing	-1 Refused	17	1.3		
	System	1	.1		
	Total	17	1.4		
Total		1256	100.0		

Q3 Which of the following captures your general opinion? Environmental regulations in this country are .....

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Are Much Too Strong	31	2.5	2.5	2.5
	2 Are Too Strong	100	7.9	8.0	10.5
	3 Are About Right	326	25.9	26.3	36.8
	4 Need to be Somewhat Stronger	497	39.6	40.1	76.9
	5 Need to be Much Stronger	286	22.8	23.1	100.0
	Total	1240	98.7	100.0	
Missing	-1 Refused	16	1.3		
Total		1256	100.0		

Q4 Which is the most important environmental problem facing the U. S. today?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Toxic waste	146	11.6	11.9	11.9
	2 Ozone depletion	125	9.9	10.1	22.0
	3 Endangered species	10	.8	.8	22.8
	4 Acid Rain	3	.2	.2	23.0
	5 Global Warming	441	35.1	35.8	58.8
	6 Smog	55	4.4	4.4	63.2
	7 Urban Sprawl	84	6.7	6.8	70.0
	8 Water pollution	97	7.7	7.8	77.9
	9 Overpopulation	123	9.8	10.0	87.9
	10 Destruction of ecosystems	150	11.9	12.1	100.0
	Total	1233	98.1	100.0	
Missing	-1 Refused	23	1.9		
Total		1256	100.0		

Q4B Of the remaining environmental problems below, which is the most important problem facing the US today?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Toxic waste	150	11.9	12.2	12.2
	2 Ozone depletion	214	17.1	17.4	29.6
	3 Endangered species	26	2.1	2.1	31.8
	4 Acid Rain	8	.6	.7	32.4
	5 Global Warming	183	14.6	14.9	47.3
	6 Smog	60	4.8	4.9	52.2
	7 Urban Sprawl	113	9.0	9.2	61.4
	8 Water pollution	146	11.6	11.9	73.3
	9 Overpopulation	108	8.6	8.8	82.1
	10 Destruction of ecosystems	221	17.6	17.9	100.0
	Total	1230	97.9	100.0	
Missing	-1 Refused	3	.2		
	System	23	1.9		
	Total	26	2.1		
Total		1256	100.0		

Statistics

Q5_miles Miles

N	Valid	873
	Missing	382
Mean		11758.18
Median		10000.00

Q5_Codes Codes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I don't drive	187	14.9	49.7	49.7
	2 I do not know	189	15.0	50.3	100.0
	Total	376	29.9	100.0	
Missing	-1 Refused	7	.5		
	System	873	69.6		
	Total	880	70.1		
Total		1256	100.0		

Q6 Approximately how much did you pay for electricity last month?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Under $25	45	3.6	3.6	3.6
	2 $25 to $50	125	9.9	10.0	13.6
	3 $50 to $75	209	16.6	16.8	30.4
	4 $75 to $100	198	15.7	15.8	46.2
	5 $100 to $125	176	14.0	14.1	60.3
	6 $125 to $150	131	10.4	10.5	70.8
	7 $150 to $200	128	10.2	10.2	81.0
	8 Over $200	112	8.9	9.0	90.0
	9 I do not know	125	9.9	10.0	100.0
	Total	1248	99.4	100.0	
Missing	-1 Refused	8	.6		
Total		1256	100.0		

Q7 If it solved global warming would you be willing to pay $5 more a month on your electricity bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	919	73.1	74.0	74.0
	2 No	323	25.7	26.0	100.0
	Total	1241	98.8	100.0	
Missing	-1 Refused	15	1.2		
Total		1256	100.0		

Q7A Would you be willing to pay $10 more a month on your electricity bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	574	45.7	62.9	62.9
	2 No	339	27.0	37.1	100.0
	Total	913	72.7	100.0	
Missing	-1 Refused	6	.5		
	System	337	26.9		
	Total	343	27.3		
Total		1256	100.0		

Q7B Would you be willing to pay $15 more a month on your electricity bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	329	26.2	57.9	57.9
	2 No	240	19.1	42.1	100.0
	Total	569	45.3	100.0	
Missing	-1 Refused	4	.4		
	System	682	54.3		
	Total	686	54.7		
Total		1256	100.0		

Q7C Would you be willing to pay $25 more a month on your electricity bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	194	15.4	58.9	58.9
	2 No	135	10.7	41.1	100.0
	Total	329	26.2	100.0	
Missing	-1 Refused	1	.1		
	System	926	73.8		
	Total	927	73.8		
Total		1256	100.0		

Q7D Would you be willing to pay $50 more a month on your electricity bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	89	7.1	45.8	45.8
	2 No	105	8.4	54.2	100.0
	Total	194	15.4	100.0	
Missing	-1 Refused	0	.0		
	System	1062	84.6		
	Total	1062	84.6		
Total		1256	100.0		

Q7E Would you be willing to pay $75 more a month on your electricity bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	59	4.7	66.4	66.4
	2 No	30	2.4	33.6	100.0
	Total	89	7.1	100.0	
Missing	System	1167	92.9		
Total		1256	100.0		

Q7F Would you be willing to pay $100 more a month on your electricity bill?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes	47	3.7	79.2	79.2
	2 No	12	1.0	20.8	100.0
	Total	59	4.7	100.0	
Missing	System	1197	95.3		
Total		1256	100.0		

Q5_2 There is a lot of talk about global warming caused by carbon dioxide emissions from human activities. Which of the following do you think best describes your view?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Immediate and drastic action is necessary.	233	18.5	18.9	18.9
	2 We should take some action now.	534	42.5	43.2	62.1
	3 More research is needed before action is taken.	345	27.5	27.9	90.0
	4 This is not a serious problem.	124	9.8	10.0	100.0
	Total	1236	98.4	100.0	
Missing	-1 Refused	20	1.6		
Total		1256	100.0		

Q8_1 How harmful do you think each of these power sources is? Coal :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Harmful	364	29.0	29.4	29.4
	2 Moderately Harmful	315	25.1	25.4	54.8
	3 Somewhat Harmful	279	22.2	22.5	77.4
	4 Slightly Harmful	103	8.2	8.3	85.7
	5 Not Harmful At All	64	5.1	5.2	90.8
	6 Not Sure	113	9.0	9.2	100.0
	Total	1237	98.5	100.0	
Missing	-1 Refused	18	1.5		
Total		1256	100.0		

Q8_2 How harmful do you think each of these power sources is? Natural Gas :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Harmful	58	4.7	4.7	4.7
	2 Moderately Harmful	195	15.5	15.8	20.5
	3 Somewhat Harmful	378	30.1	30.5	51.0
	4 Slightly Harmful	292	23.2	23.6	74.6
	5 Not Harmful At All	181	14.4	14.7	89.3
	6 Not Sure	133	10.6	10.7	100.0
	Total	1237	98.5	100.0	
Missing	-1 Refused	19	1.5		
Total		1256	100.0		

Q8_3 How harmful do you think each of these power sources is? Nuclear :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Harmful	450	35.8	36.5	36.5
	2 Moderately Harmful	176	14.0	14.3	50.7
	3 Somewhat Harmful	194	15.5	15.7	66.5
	4 Slightly Harmful	173	13.8	14.0	80.5
	5 Not Harmful At All	121	9.7	9.8	90.3
	6 Not Sure	120	9.5	9.7	100.0
	Total	1235	98.3	100.0	
Missing	-1 Refused	21	1.7		
Total		1256	100.0		

Q8_4 How harmful do you think each of these power sources is? Dams :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Harmful	33	2.6	2.7	2.7
	2 Moderately Harmful	81	6.4	6.5	9.2
	3 Somewhat Harmful	194	15.4	15.7	24.9
	4 Slightly Harmful	298	23.7	24.1	49.1
	5 Not Harmful At All	496	39.5	40.2	89.3
	6 Not Sure	132	10.5	10.7	100.0
	Total	1234	98.2	100.0	
Missing	-1 Refused	22	1.8		
Total		1256	100.0		

Q8_5 How harmful do you think each of these power sources is? Oil :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Harmful	299	23.8	24.2	24.2
	2 Moderately Harmful	323	25.7	26.2	50.4
	3 Somewhat Harmful	313	24.9	25.4	75.7
	4 Slightly Harmful	150	12.0	12.2	87.9
	5 Not Harmful At All	56	4.4	4.5	92.4
	6 Not Sure	93	7.4	7.6	100.0
	Total	1233	98.2	100.0	
Missing	-1 Refused	23	1.8		
Total		1256	100.0		

Q8_6 How harmful do you think each of these power sources is? Solar :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Harmful	23	1.8	1.8	1.8
	2 Moderately Harmful	23	1.8	1.8	3.7
	3 Somewhat Harmful	54	4.3	4.4	8.0
	4 Slightly Harmful	103	8.2	8.4	16.4
	5 Not Harmful At All	931	74.1	75.5	91.9
	6 Not Sure	100	8.0	8.1	100.0
	Total	1234	98.2	100.0	
Missing	-1 Refused	22	1.8		
Total		1256	100.0		

Q8_7 How harmful do you think each of these power sources is? Wind :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Harmful	27	2.2	2.2	2.2
	2 Moderately Harmful	22	1.8	1.8	4.0
	3 Somewhat Harmful	68	5.4	5.5	9.5
	4 Slightly Harmful	124	9.9	10.1	19.6
	5 Not Harmful At All	894	71.2	72.6	92.3
	6 Not Sure	95	7.6	7.7	100.0
	Total	1231	98.0	100.0	
Missing	-1 Refused	25	2.0		
Total		1256	100.0		

Q9_1 How expensive do you think it is to produce electricity with each of the following fuels? Coal :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Expensive	136	10.9	11.1	11.1
	2 Somewhat Expensive	222	17.7	18.1	29.1
	3 Moderately Priced	321	25.6	26.1	55.2
	4 Somewhat Cheap	228	18.1	18.5	73.7
	5 Very Cheap	108	8.6	8.8	82.5
	6 Not Sure	216	17.2	17.5	100.0
	Total	1231	98.0	100.0	
Missing	-1 Refused	25	2.0		
Total		1256	100.0		

Q9_2 How expensive do you think it is to produce electricity with each of the following fuels? Natural Gas :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Expensive	190	15.1	15.4	15.4
	2 Somewhat Expensive	349	27.8	28.3	43.7
	3 Moderately Priced	359	28.6	29.1	72.9
	4 Somewhat Cheap	130	10.3	10.5	83.4
	5 Very Cheap	16	1.3	1.3	84.7
	6 Not Sure	188	15.0	15.3	100.0
	Total	1232	98.1	100.0	
Missing	-1 Refused	24	1.9		
Total		1256	100.0		

Q9_3 How expensive do you think it is to produce electricity with each of the following fuels? Nuclear :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Expensive	329	26.2	26.7	26.7
	2 Somewhat Expensive	289	23.0	23.4	50.1
	3 Moderately Priced	196	15.6	15.9	66.0
	4 Somewhat Cheap	110	8.8	8.9	74.9
	5 Very Cheap	56	4.5	4.6	79.5
	6 Not Sure	253	20.1	20.5	100.0
	Total	1233	98.2	100.0	
Missing	-1 Refused	23	1.8		
Total		1256	100.0		

Q9_4 How expensive do you think it is to produce electricity with each of the following fuels? Dams :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Expensive	69	5.5	5.6	5.6
	2 Somewhat Expensive	172	13.7	13.9	19.5
	3 Moderately Priced	375	29.9	30.4	49.9
	4 Somewhat Cheap	261	20.8	21.2	71.1
	5 Very Cheap	121	9.7	9.9	80.9
	6 Not Sure	235	18.7	19.1	100.0
	Total	1233	98.2	100.0	
Missing	-1 Refused	23	1.8		
Total		1256	100.0		

Q9_5 How expensive do you think it is to produce electricity with each of the following fuels? Oil :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Expensive	352	28.1	28.7	28.7
	2 Somewhat Expensive	380	30.2	30.9	59.5
	3 Moderately Priced	235	18.7	19.1	78.7
	4 Somewhat Cheap	68	5.4	5.5	84.2
	5 Very Cheap	14	1.2	1.2	85.3
	6 Not Sure	180	14.4	14.7	100.0
	Total	1230	97.9	100.0	
Missing	-1 Refused	26	2.1		
Total		1256	100.0		

Q9_6 How expensive do you think it is to produce electricity with each of the following fuels? Solar :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Expensive	115	9.1	9.3	9.3
	2 Somewhat Expensive	201	16.0	16.3	25.6
	3 Moderately Priced	210	16.7	17.1	42.7
	4 Somewhat Cheap	246	19.6	20.0	62.7
	5 Very Cheap	272	21.7	22.1	84.9
	6 Not Sure	186	14.8	15.1	100.0
	Total	1230	98.0	100.0	
Missing	-1 Refused	25	2.0		
Total		1256	100.0		

Q9_7 How expensive do you think it is to produce electricity with each of the following fuels? Wind :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Very Expensive	65	5.2	5.3	5.3
	2 Somewhat Expensive	155	12.4	12.7	18.0
	3 Moderately Priced	206	16.4	16.8	34.8
	4 Somewhat Cheap	250	19.9	20.4	55.2
	5 Very Cheap	341	27.1	27.9	83.1
	6 Not Sure	207	16.5	16.9	100.0
	Total	1223	97.4	100.0	
Missing	-1 Refused	32	2.6		
Total		1256	100.0		

Q10_1 For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. Oil :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Reduce A Lot	415	33.0	33.9	33.9
	2 Reduce Somewhat	375	29.9	30.7	64.6
	3 Keep Same	254	20.2	20.7	85.3
	4 Increase Somewhat	61	4.8	4.9	90.3
	5 Increase A Lot	38	3.0	3.1	93.3
	6 Not Use At All	81	6.5	6.7	100.0
	Total	1223	97.4	100.0	
Missing	-1 Refused	33	2.6		
Total		1256	100.0		

Q10_2 For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. Dams :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Reduce A Lot	27	2.1	2.2	2.2
	2 Reduce Somewhat	112	8.9	9.2	11.4
	3 Keep Same	522	41.6	43.0	54.4
	4 Increase Somewhat	319	25.4	26.2	80.6
	5 Increase A Lot	180	14.3	14.8	95.4
	6 Not Use At All	56	4.5	4.6	100.0
	Total	1215	96.7	100.0	
Missing	-1 Refused	41	3.3		
Total		1256	100.0		

Q10_3 For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. Nuclear :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Reduce A Lot	185	14.7	15.2	15.2
	2 Reduce Somewhat	171	13.6	14.1	29.3
	3 Keep Same	312	24.9	25.7	55.0
	4 Increase Somewhat	242	19.2	19.9	74.8
	5 Increase A Lot	159	12.6	13.0	87.9
	6 Not Use At All	148	11.8	12.1	100.0
	Total	1216	96.8	100.0	
Missing	-1 Refused	40	3.2		
Total		1256	100.0		

Q10_4 For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. Solar :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Reduce A Lot	40	3.2	3.3	3.3
	2 Reduce Somewhat	56	4.5	4.6	7.9
	3 Keep Same	168	13.4	13.8	21.7
	4 Increase Somewhat	293	23.3	24.1	45.8
	5 Increase A Lot	619	49.3	50.9	96.7
	6 Not Use At All	40	3.2	3.3	100.0
	Total	1217	96.9	100.0	
Missing	-1 Refused	39	3.1		
Total		1256	100.0		

Q10_5 For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. Coal :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Reduce A Lot	257	20.4	21.0	21.0
	2 Reduce Somewhat	287	22.8	23.5	44.5
	3 Keep Same	349	27.8	28.6	73.1
	4 Increase Somewhat	143	11.4	11.7	84.8
	5 Increase A Lot	96	7.6	7.8	92.6
	6 Not Use At All	90	7.1	7.4	100.0
	Total	1220	97.1	100.0	
Missing	-1 Refused	36	2.9		
Total		1256	100.0		

Q10_6 For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. Wind :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Reduce A Lot	22	1.8	1.8	1.8
	2 Reduce Somewhat	48	3.8	3.9	5.7
	3 Keep Same	174	13.9	14.3	20.0
	4 Increase Somewhat	284	22.6	23.3	43.3
	5 Increase A Lot	634	50.5	52.1	95.4
	6 Not Use At All	56	4.5	4.6	100.0
	Total	1218	97.0	100.0	
Missing	-1 Refused	38	3.0		
Total		1256	100.0		

Q10_7 For each power source indicate whether you feel the U.S should increase or reduce its use, or not use at all. Natural Gas :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Reduce A Lot	79	6.3	6.5	6.5
	2 Reduce Somewhat	237	18.9	19.4	25.9
	3 Keep Same	478	38.1	39.1	65.0
	4 Increase Somewhat	267	21.3	21.9	86.9
	5 Increase A Lot	110	8.7	9.0	95.9
	6 Not Use At All	51	4.0	4.1	100.0
	Total	1221	97.2	100.0	
Missing	-1 Refused	35	2.8		
Total		1256	100.0		

Q11_1 How much do you think the U. S. will rely on each of the following fuels for electricity over the next 10 years? Coal :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A Lot (More than 25% of electricity)	434	34.5	35.6	35.6
	2 Some (10-25%)	458	36.5	37.7	73.3
	3 Not Much (5-10%)	220	17.5	18.1	91.4
	4 Very Little (Less than 5%)	105	8.4	8.6	100.0
	Total	1217	96.9	100.0	
Missing	-1 Refused	39	3.1		
Total		1256	100.0		

Q11_2 How much do you think the U. S. will rely on each of the following fuels for electricity over the next 10 years? Nuclear :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A Lot (More than 25% of electricity)	344	27.4	28.4	28.4
	2 Some (10-25%)	518	41.2	42.8	71.2
	3 Not Much (5-10%)	245	19.5	20.2	91.5
	4 Very Little (Less than 5%)	103	8.2	8.5	100.0
	Total	1210	96.3	100.0	
Missing	-1 Refused	46	3.7		
Total		1256	100.0		

Q11_3 How much do you think the U. S. will rely on each of the following fuels for electricity over the next 10 years? Natural Gas :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A Lot (More than 25% of electricity)	421	33.5	34.8	34.8
	2 Some (10-25%)	616	49.0	50.9	85.6
	3 Not Much (5-10%)	126	10.0	10.4	96.0
	4 Very Little (Less than 5%)	48	3.8	4.0	100.0
	Total	1210	96.3	100.0	
Missing	-1 Refused	46	3.7		
Total		1256	100.0		

Q11_4 How much do you think the U. S. will rely on each of the following fuels for electricity over the next 10 years? Oil :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A Lot (More than 25% of electricity)	549	43.7	45.3	45.3
	2 Some (10-25%)	465	37.0	38.4	83.6
	3 Not Much (5-10%)	138	11.0	11.4	95.0
	4 Very Little (Less than 5%)	61	4.8	5.0	100.0
	Total	1212	96.5	100.0	
Missing	-1 Refused	44	3.5		
Total		1256	100.0		

Q11_5 How much do you think the U. S. will rely on each of the following fuels for electricity over the next 10 years? Dams :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A Lot (More than 25% of electricity)	212	16.9	17.4	17.4
	2 Some (10-25%)	527	42.0	43.4	60.8
	3 Not Much (5-10%)	352	28.1	29.0	89.8
	4 Very Little (Less than 5%)	124	9.9	10.2	100.0
	Total	1215	96.8	100.0	
Missing	-1 Refused	40	3.2		
Total		1256	100.0		

Q11_6 How much do you think the U. S. will rely on each of the following fuels for electricity over the next 10 years? 'Renewables(Solar, Wind)' :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A Lot (More than 25% of electricity)	277	22.1	22.8	22.8
	2 Some (10-25%)	362	28.8	29.7	52.4
	3 Not Much (5-10%)	349	27.8	28.7	81.1
	4 Very Little (Less than 5%)	231	18.4	18.9	100.0
	Total	1219	97.1	100.0	
Missing	-1 Refused	37	2.9		
Total		1256	100.0		

Q12 To meet new electricity demand, utilities will have to build additional power plants. How would you feel if a new natural gas fired power plant were built within 25 miles of your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Oppose	262	20.9	21.2	21.2
	2 Somewhat Oppose	406	32.3	32.8	54.0
	3 Support	514	40.9	41.6	95.6
	4 Strongly Support	54	4.3	4.4	100.0
	Total	1237	98.5	100.0	
Missing	-1 Refused	19	1.5		
Total		1256	100.0		

Q13 How would you feel if a new coal-fired power plant were built within 25 miles of your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Oppose	522	41.6	42.6	42.6
	2 Somewhat Oppose	427	34.0	34.8	77.4
	3 Support	244	19.4	19.9	97.3
	4 Strongly Support	33	2.7	2.7	100.0
	Total	1227	97.7	100.0	
Missing	-1 Refused	29	2.3		
Total		1256	100.0		

Q14 How would you feel if a new nuclear power plant were built within 25 miles of your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Oppose	708	56.4	57.4	57.4
	2 Somewhat Oppose	261	20.8	21.1	78.5
	3 Support	207	16.5	16.7	95.3
	4 Strongly Support	58	4.7	4.7	100.0
	Total	1234	98.3	100.0	
Missing	-1 Refused	22	1.7		
Total		1256	100.0		

Q15 How would you feel if a large wind power facility (with 100 250-foot towers) were built within 25 miles of your home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Oppose	89	7.1	7.2	7.2
	2 Somewhat Oppose	219	17.4	17.8	25.0
	3 Support	590	46.9	47.9	72.9
	4 Strongly Support	334	26.6	27.1	100.0
	Total	1232	98.1	100.0	
Missing	-1 Refused	24	1.9		
Total		1256	100.0		

Q16 There are approximately 100 nuclear power plants in the United States. There was a serious accident at Three Mile Island in 1979. How likely do you think it is that in the next 10 years there will be a serious accident at a nuclear power plant?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Almost certainly will happen	133	10.6	10.7	10.7
	2 Very likely	198	15.8	15.9	26.6
	3 Somewhat likely	350	27.9	28.1	54.7
	4 Somewhat unlikely	201	16.0	16.1	70.8
	5 Very unlikely	186	14.8	14.9	85.8
	6 Almost certainly will not happen	54	4.3	4.3	90.1
	7 Not sure	123	9.8	9.9	100.0
	Total	1244	99.1	100.0	
Missing	-1 Refused	12	.9		
Total		1256	100.0		

Q17 Would you support use of this technology to cut greenhouse gas emissions even if electricity prices went up?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Support	128	10.2	10.4	10.4
	2 Support Somewhat	406	32.3	32.9	43.3
	3 Oppose Somewhat	287	22.9	23.3	66.6
	4 Oppose Strongly	189	15.1	15.3	82.0
	5 Neither Support Nor Oppose	222	17.7	18.0	100.0
	Total	1233	98.2	100.0	
Missing	-1 Refused	22	1.8		
Total		1256	100.0		

Q18 If carbon dioxide were pumped deep under ground within 25 miles of your home would you support or oppose such a facility?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Support	46	3.7	3.7	3.7
	2 Support Somewhat	125	10.0	10.1	13.8
	3 Oppose Somewhat	298	23.7	24.0	37.9
	4 Oppose Strongly	472	37.6	38.0	75.9
	5 Neither Support Nor Oppose	91	7.3	7.4	83.3
	6 Not Sure	207	16.5	16.7	100.0
	Total	1240	98.7	100.0	
Missing	-1 Refused	16	1.3		
Total		1256	100.0		

Q19 Do you agree or disagree with the following: Nuclear waste can be stored safely for many years.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Agree	76	6.1	6.1	6.1
	2 Agree	240	19.1	19.3	25.4
	3 Disagree	337	26.8	27.1	52.5
	4 Disagree Strongly	332	26.4	26.7	79.2
	5 Not Sure	259	20.6	20.8	100.0
	Total	1244	99.0	100.0	
Missing	-1 Refused	12	1.0		
Total		1256	100.0		

Q20 If there were a safe and effective way to deal with nuclear waste would you support a significant expansion of nuclear power to meet future energy needs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes, Definitely	315	25.1	25.3	25.3
	2 Yes, but with reservations	476	37.9	38.3	63.7
	3 Probably Not	200	15.9	16.1	79.7
	4 Definitely Not	111	8.9	9.0	88.7
	5 Not Sure	140	11.2	11.3	100.0
	Total	1243	98.9	100.0	
Missing	-1 Refused	13	1.1		
Total		1256	100.0		

Q21 Do you think the United States should complete and use this facility to store spent nuclear waste underground?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes, definitely	228	18.1	18.4	18.4
	2 Yes, but only if the state of Nevada agrees	293	23.3	23.6	42.0
	3 No, the federal government needs to find another site	151	12.0	12.2	54.2
	4 No, because we shouldn't have such a facility	229	18.2	18.4	72.6
	5 Not Sure	340	27.0	27.4	100.0
	Total	1240	98.8	100.0	
Missing	-1 Refused	16	1.2		
Total		1256	100.0		

Q22 A recent proposal from nuclear scientists is to bury waste permanently in holes drilled deeply into the Earth's crust, where no water flows. The pressure of the earth would keep the waste locked in place. Do you think such dispersed storage is a good idea?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes, Definitely	70	5.6	5.7	5.7
	2 Worth Considering	407	32.4	32.8	38.5
	3 Probably Should Not Do	251	20.0	20.2	58.7
	4 Definitely Not	208	16.5	16.7	75.4
	5 Not sure	305	24.3	24.6	100.0
	Total	1241	98.8	100.0	
Missing	-1 Refused	15	1.2		
Total		1256	100.0		

Q23 The Department of Energy is considering a large effort to introduce reprocessing in the United States. Do you support or oppose such an effort?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Support strongly	250	19.9	20.2	20.2
	2 Support somewhat	499	39.7	40.5	60.7
	3 Oppose somewhat	115	9.2	9.3	70.0
	4 Oppose strongly	77	6.1	6.2	76.3
	5 Not Sure	293	23.3	23.7	100.0
	Total	1233	98.2	100.0	
Missing	-1 Refused	22	1.8		
Total		1256	100.0		

Q24 Would you support a significant expansion of nuclear power if the United States reprocessed all of its nuclear fuel?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Support strongly	197	15.7	16.0	16.0
	2 Support somewhat	418	33.3	33.9	49.9
	3 Oppose somewhat	152	12.1	12.3	62.2
	4 Oppose strongly	147	11.7	11.9	74.1
	5 Not Sure	319	25.4	25.9	100.0
	Total	1233	98.2	100.0	
Missing	-1 Refused	23	1.8		
Total		1256	100.0		

Q26 Recently the United States Government agreed to allow U. S. companies to sell nuclear power plant technology to India. India already has the knowledge to make nuclear bombs, but it has not signed the international agreement to prohibit the spread of nucle

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Strongly Oppose	552	43.9	44.6	44.6
	2 Oppose Somewhat	303	24.2	24.5	69.1
	3 Support Somewhat	135	10.7	10.9	80.0
	4 Strongly Support	24	1.9	2.0	82.0
	5 Not Sure	223	17.8	18.0	100.0
	Total	1237	98.5	100.0	
Missing	-1 Refused	18	1.5		
Total		1256	100.0		

Q27 Other countries allow their companies to sell nuclear power plants and technology to countries that do not yet have nuclear weapons. Should the United States government allow U. S. companies to do so as well?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Yes, definitely	33	2.6	2.7	2.7
	2 Yes, but with reservations	215	17.2	17.4	20.1
	3 Probably not	349	27.8	28.2	48.3
	4 No, definitely not	444	35.3	35.9	84.3
	5 Not sure	194	15.5	15.7	100.0
	Total	1236	98.4	100.0	
Missing	-1 Refused	20	1.6		
Total		1256	100.0		

Q28 In politics do you consider yourself to be a Democrat, Republican, another partisan, or a non-partisan?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Republican	306	24.4	24.8	24.8
	2 Democrat	457	36.4	37.0	61.7
	3 Green	17	1.3	1.3	63.1
	4 Reform	4	.3	.3	63.4
	5 Other (please specify)	48	3.8	3.9	67.3
	6 No Party	404	32.2	32.7	100.0
	Total	1236	98.4	100.0	
Missing	-1 Refused	20	1.6		
Total		1256	100.0		

PPAGECT4 Age - 4 Categories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 18-29	274	21.8	21.8	21.8
	2 30-44	351	27.9	27.9	49.7
	3 45-59	350	27.8	27.8	77.6
	4 60+	282	22.4	22.4	100.0
	Total	1256	100.0	100.0	

PPAGECAT Age - 7 Categories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 18-24	136	10.8	10.8	10.8
	2 25-34	236	18.8	18.8	29.6
	3 35-44	253	20.1	20.1	49.7
	4 45-54	217	17.3	17.3	67.0
	5 55-64	219	17.4	17.4	84.4
	6 65-74	125	10.0	10.0	94.4
	7 75+	70	5.6	5.6	100.0
	Total	1256	100.0	100.0	

PPDUALIN Dual income HH

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	510	40.6	40.6	40.6
	1 Yes	746	59.4	59.4	100.0
	Total	1256	100.0	100.0	

PPEDUC What is the highest degree or level of education that you have completed?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than high school	46	3.7	3.7	3.7
	2 Some high school, no diploma	132	10.5	10.5	14.1
	3 Graduated from high school - Diploma or equivalent (GED)	402	32.0	32.0	46.1
	4 Some college, no degree	267	21.3	21.3	67.4
	5 Associate degree (AA, AS)	76	6.1	6.1	73.5
	6 Bachelor's degree	204	16.3	16.3	89.8
	7 Master's degree	100	7.9	7.9	97.7
	8 Professional degree (MD, DDS, LLB, JD)	16	1.3	1.3	99.0
	9 Doctorate degree	13	1.0	1.0	100.0
	Total	1256	100.0	100.0	

PPEDUCAT Education (Categorical)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than high school	178	14.1	14.1	14.1
	2 High school	402	32.0	32.0	46.1
	3 Some college	344	27.4	27.4	73.5
	4 Bachelor's degree or higher	333	26.5	26.5	100.0
	Total	1256	100.0	100.0	

PPETHM Race/Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 White, Non-Hispanic	878	69.9	69.9	69.9
	2 Black, Non-Hispanic	142	11.3	11.3	81.2
	3 Other, Non-Hispanic	61	4.8	4.8	86.0
	4 Hispanic	161	12.8	12.8	98.9
	5 2+ Races, Non-Hispanic	14	1.1	1.1	100.0
	Total	1256	100.0	100.0	

PPGENDER What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Male	611	48.6	48.6	48.6
	2 Female	645	51.4	51.4	100.0
	Total	1256	100.0	100.0	

PPHHHEAD Household Head

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	281	22.4	22.4	22.4
	1 Yes	975	77.6	77.6	100.0
	Total	1256	100.0	100.0	

PPHHSIZE Household Size

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	256	20.4	20.4	20.4
	2	454	36.2	36.2	56.6
	3	240	19.1	19.1	75.7
	4	183	14.6	14.6	90.3
	5	72	5.8	5.8	96.1
	6	25	2.0	2.0	98.1
	7	18	1.5	1.5	99.5
	8	5	.4	.4	99.9
	9	0	.0	.0	100.0
	10	0	.0	.0	100.0
	Total	1256	100.0	100.0	

PPHOUSE Which of these types of housing best describes where you live?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 A single-family house detached	757	60.2	60.2	60.2
	2 A single-family house attached	84	6.7	6.7	67.0
	3 An apartment	220	17.5	17.5	84.5
	4 A condominium or co-op	52	4.2	4.2	88.6
	5 College dormitory	3	.3	.3	88.9
	6 A manufactured or mobile home	101	8.0	8.0	96.9
	7 Other	39	3.1	3.1	100.0
	Total	1256	100.0	100.0	

PPINCIMP Household Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Less than $5,000	39	3.1	3.1	3.1
	2 $5,000 to $7,499	54	4.3	4.3	7.4
	3 $7,500 to $9,999	33	2.6	2.6	10.0
	4 $10,000 to $12,499	41	3.3	3.3	13.3
	5 $12,500 to $14,999	55	4.4	4.4	17.7
	6 $15,000 to $19,999	67	5.4	5.4	23.0
	7 $20,000 to $24,999	94	7.5	7.5	30.5
	8 $25,000 to $29,999	83	6.6	6.6	37.1
	9 $30,000 to $34,999	77	6.1	6.1	43.2
	10 $35,000 to $39,999	85	6.8	6.8	50.0
	11 $40,000 to $49,999	124	9.9	9.9	59.9
	12 $50,000 to $59,999	120	9.5	9.5	69.4
	13 $60,000 to $74,999	118	9.4	9.4	78.9
	14 $75,000 to $84,999	87	7.0	7.0	85.8
	15 $85,000 to $99,999	51	4.1	4.1	89.9
	16 $100,000 to $124,999	60	4.8	4.8	94.7
	17 $125,000 to $149,999	27	2.2	2.2	96.9
	18 $150,000 to $174,999	16	1.3	1.3	98.1
	19 $175,000 or more	24	1.9	1.9	100.0
	Total	1256	100.0	100.0	

PPNET HHs with Internet Access

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 No	497	39.6	39.6	39.6
	1 Yes	759	60.4	60.4	100.0
	Total	1256	100.0	100.0	

PPMARIT Are you currently...

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Married	698	55.6	55.6	55.6
	2 Single (never married)	320	25.5	25.5	81.1
	3 Divorced	130	10.3	10.3	91.4
	4 Widowed	68	5.4	5.4	96.8
	5 Separated	40	3.2	3.2	100.0
	Total	1256	100.0	100.0	

PPMSACAT MSA Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 Non-Metro	208	16.6	16.6	16.6
	1 Metro	1047	83.4	83.4	100.0
	Total	1256	100.0	100.0	

PPREG4 Region 4 - Based On State Of Residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Northeast	231	18.4	18.4	18.4
	2 Midwest	283	22.5	22.5	40.9
	3 South	456	36.3	36.3	77.2
	4 West	286	22.8	22.8	100.0
	Total	1256	100.0	100.0	

PPREG9 Region 9 - Based on State of Residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 New England	69	5.5	5.5	5.5
	2 Mid-Atlantic	162	12.9	12.9	18.4
	3 East-North Central	196	15.6	15.6	34.0
	4 West-North Central	87	6.9	6.9	40.9
	5 South Atlantic	239	19.1	19.1	59.9
	6 East-South Central	87	6.9	6.9	66.9
	7 West-South Central	129	10.3	10.3	77.2
	8 Mountain	122	9.7	9.7	86.9
	9 Pacific	165	13.1	13.1	100.0
	Total	1256	100.0	100.0	

PPRENT Do you own or rent your residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 Own	753	60.0	60.0	60.0
	2 Rent	381	30.3	30.3	90.3
	3 Do not pay for housing	122	9.7	9.7	100.0
	Total	1256	100.0	100.0	

PPT01 Presence Of Household Members - Children under 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1247	99.3	99.3	99.3
	1	8	.6	.6	99.9
	2	1	.1	.1	100.0
	Total	1256	100.0	100.0	

PPT1317 Presence Of Household Members - Children 13-17

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1123	89.4	89.4	89.4
	1	96	7.7	7.7	97.1
	2	32	2.5	2.5	99.6
	3	5	.4	.4	100.0
	Total	1256	100.0	100.0	

PPT18OV Presence Of Household Members - Adults 18+

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	276	22.0	22.0	22.0
	2	659	52.5	52.5	74.5
	3	202	16.1	16.1	90.6
	4	84	6.7	6.7	97.2
	5	22	1.8	1.8	99.0
	6	6	.4	.4	99.4
	7	7	.6	.6	100.0
	8	0	.0	.0	100.0
	Total	1256	100.0	100.0	

PPT25 Presence Of Household Members - Children 2-5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1138	90.6	90.6	90.6
	1	86	6.9	6.9	97.5
	2	30	2.4	2.4	99.9
	3	2	.1	.1	100.0
	Total	1256	100.0	100.0	

PPT612 Presence Of Household Members - Children 6-12

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	1095	87.2	87.2	87.2
	1	95	7.6	7.6	94.7
	2	51	4.0	4.0	98.8
	3	15	1.2	1.2	100.0
	Total	1256	100.0	100.0	

PPWORK Which statement best describes your current employment status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 I work as a paid employee	624	49.7	49.7	49.7
	2 I am self-employed	71	5.7	5.7	55.3
	3 I am an owner/partner in small business, prof practice, farm	19	1.5	1.5	56.8
	4 I work at least 15 hrs/wk w/o pay in family business/farm	2	.1	.1	57.0
	5 I am unemployed, temporarily laid off, but looking for work	66	5.2	5.2	62.2
	6 I am retired	172	13.7	13.7	76.0
	7 I am disabled	136	10.9	10.9	86.8
	8 I am a homemaker	111	8.9	8.9	95.7
	9 Other	54	4.3	4.3	100.0
	Total	1256	100.0	100.0	